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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/989,750	10/26/2010	Hirofumi Hase	1163-0838PUS1	1826

127226 7590 02/01/2017  
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EXAMINER
ESHETE, ZELALEM

ART UNIT	PAPER NUMBER
3748	

NOTIFICATION DATE	DELIVERY MODE
02/01/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* HIROFUMI HASE

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Appeal 2015-002751  
Application 12/989,750  
Technology Center 3700

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Before JOHN C. KERINS, AMANDA F. WIEKER, and  
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Hirofumi Hase (“Appellant”) appeals under 35 U.S.C. § 134(a) from the Examiner’s decision rejecting claims 1, 6, 7, and 9–11.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE and ENTER A NEW GROUND OF REJECTION pursuant to our authority under 37 C.F.R. § 41.50(b).

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<sup>1</sup> Appellant submits the real party in interest is Mitsubishi Electric Corporation. Appeal Br. 1.

### THE CLAIMED SUBJECT MATTER

Claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A solenoid valve for variable valve timing control devices which adjusts an amount of a working fluid fed or discarded to or from a variable valve timing control device equipped with a pushing member for pushing a rotor toward a direction of an advance angle, said solenoid valve comprising:

a valve housing of cylindrical shape which includes a plurality of ports for supplying and discarding said working fluid to and from said variable valve timing control device;

a spool moving within said valve housing in a direction of an axis thereof to adjust the fed or discarded amount of said working fluid flowing via said ports according to an amount of said movement, the spool including a plurality of lands each of which has a large-diameter portion, and recessed portions each of which has a small-diameter portion for connecting said plurality of lands with one another; and

a solenoid unit for driving said spool,

wherein a groove portion for adjusting the amount of the working fluid which is close to an intermediate current value is formed in an edge portion of said plurality of lands so that the groove portion is formed discontinuously along a direction of a circumference of the land.

### REJECTION

Claims 1, 6, 7, and 9–11 are rejected under 35 U.S.C. § 103(a) as unpatentable over Ken (US 6,006,708, issued Dec. 28, 1999) and Buttner (US 2004/0069359 A1, published Apr. 15, 2004).

## DISCUSSION

### *New Ground of Rejection — Indefiniteness*

Pursuant to our authority under 37 C.F.R. § 41.50(b), we reject claims 1, 6, 7, and 9–11 under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.

“As the statutory language of ‘particular[ity]’ and ‘distinct[ness]’ indicates, claims are required to be cast in clear—as opposed to ambiguous, vague, indefinite—terms.” *In re Packard*, 751 F.3d 1307, 1313 (Fed. Cir. 2014). “It is the applicants’ burden to precisely define the invention, not the PTO’s.” *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

Independent claims 1 and 11 each contain the following limitation:

a groove portion for adjusting the amount of the working fluid *which is close to an intermediate current value* is formed in an edge portion of said plurality of lands so that the groove portion is formed discontinuously along a direction of a circumference of the land.  
Appeal Br. 8, 10 (Claims App.) (emphasis added).

Appellant refers to Figures 2 and 3 of the application for description of the recited “groove portion.” Appeal Br. 2 (referring to notch portions 60a, 60b, and 60c). Notch portions 60a, 60b, and 60c are described as “formed at equal intervals in the circumference” of edge portions of second land portion 41b and third land portion 41c. Spec. ¶¶ 19, 21. The Specification indicates that the control current value to solenoid valve 30 controls the axial position of spool 41 to open and close advance angle side oil passage 31 and retard angle side oil passage 32. *See id.* ¶¶ 24, 26, Figs. 3a, 3c. Figure 5 illustrates the “relationship between the control current value to the solenoid valve 30, and the oil flow rate in the solenoid valve.”

*Id.* ¶ 24. The Specification, referring to Appellant’s Figure 5, describes “a case in which an intermediate current value shown by the center line Y becomes the control current value.” *Id.* ¶ 28. The intermediate current value positions spool 41 in the intermediate holding position illustrated in Appellant’s Figure 3b. *Id.* ¶ 29. Notch portions 60a, 60b, and 60c allow flow to be maintained in the intermediate holding position shown as point R in Figure 5. *Id.* The Specification also describes that “when the solenoid valve 30 is controlled by using the solenoid valve control current having a value *close to the intermediate current value*, the oil flows via notch portions 60 can increase the amount of oil flow to the advance angle side and retard angle side oil passages 31 and 32.” *Id.* ¶ 31(emphasis added).

The limitation in claims 1 and 11, “which is close to an intermediate current value,” is unclear for the following reasons. The Specification indicates that when a control current value is close to the intermediate current value, oil flowing through notch portions 60a, 60b, and 60c can increase the rate of oil flowing to the advance angle side and retard side oil passages and allows oil to flow at point R in Figure 5. Appellant’s Figure 5 indicates that oil flows over a range of current values not merely at a value close to the intermediate current value. The Specification describes notch portions 60a, 60b, and 60c formed at intervals in the circumference of edge portions of land portions 41b and 41c but does not describe how a current close to an intermediate current value relates to or affects the structure or function of notch portions 60a, 60b, and 60c. Claims 1 and 11 do not recite that working fluid flows through the “grooved portion” at a value close to the intermediate current value or increases working fluid flow to the advance angle side oil passage or retard angle side oil passage when solenoid valve

control current has “a value close to the intermediate current value.” In light of the Specification and the claim language, we determine it is unclear how the limitation “which is close to an intermediate current value” limits the “groove portion” either structurally or functionally. Therefore, we enter a new ground of rejection against independent claims 1 and 11, as well as claims 6, 7, 9, and 10 which depend from claim 1, under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention.

*Claims 1, 6, 7, and 9–11 — 35 U.S.C § 103(a)*

We do not sustain the rejection of claims 1, 6, 7, and 9–11 under 35 U.S.C. § 103(a) as being unpatentable over Ken in view of Buttner because this rejection is necessarily based on speculative assumptions as to the meaning of the claims. *See In re Steele*, 305 F.2d 859, 862–63 (CCPA 1962). Our decision regarding this rejection is based solely on the indefiniteness of the claim limitation “which is close to an intermediate current value” as discussed above. We emphasize that our decision does not mean the claims are patentable. Rather, we leave the patentability determination of these claims to the Examiner. *See* MPEP § 1213.02.

DECISION

The Examiner’s decision rejecting claims 1, 6, 7, and 9–11 under 35 U.S.C. § 103(a) is reversed.

We enter a new ground of rejection against claims 1, 6, 7, and 9–11 under 35 U.S.C. § 112, second paragraph.

## FINALITY OF DECISION

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” 37 C.F.R. § 41.50(b) also provides:

When the Board enters such a non-final decision, Appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground[s] of rejection to avoid termination of the appeal as to the rejected claims:

- (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground[s] of rejection [are] binding upon the Examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground[s] of rejection designated in this decision. Should the examiner reject the claims, Appellant may again appeal to the Board pursuant to this subpart.
- (2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED; 37 C.F.R. § 41.50(b)